## How to use the Dragino LoRa shield with Arduino MKR 1010

1. Change jumper settings:
	1. SV2, SV3 and SV4 must be set to the left! With this setting, the MOSI/MISO/SCK Pins will be available at the header pins.
2. Wire the shield as follows:

|  |  |  |
| --- | --- | --- |
| Dragino PIN | Arduino PIN | Description |
| 13 | 9 | SCK |
| 12 | 10 | MISO |
| 11 | 8 | MOSI |
| 10 | 7 | SS |
| 8 | 5 | DIO5 |
| 7 | 2 | DIO2 |
| 6 | 1 | DIO1 |
| 2 | 0 | DIO0 |
| 3V3 | 3V3 | 3,3 Volt |
| GND | GND | Ground |

1. Start Arduino and search fort he „MCCI LoRaWAN LMIC library“ – Install it
2. Open your Explorer and navigate to your Arduino library folder (C:\Users\..\Documents\Arduino for example). Open the „libraries“ folder and then open „MCCI\_LoRaWAN\_LMIC\_library“.
	1. Within this folder you find a folder called „project\_config“. Edit the file „lmic\_project\_config.h“ inside it:

	In this file you set the config your shield’s hardware. It is mandatory that you make those changes here:

	„A number of features can be enabled or disabled at compile time. This is done by adding the desired settings to the file project\_config/lmic\_project\_config.h.“
	=> <https://github.com/mcci-catena/arduino-lmic#configuration>

	Here you set some settings – Example for using Dragino 868MHz shield in Europe:

	#define CFG\_eu868

#define CFG\_sx1276\_radio 1

#define DISABLE\_PING

#define DISABLE\_BEACONS

#define LMIC\_DEBUG\_LEVEL 2

(remove the other lines first)

1. Load this test sketch: <https://gist.github.com/Commifreak/a9b0195115e225b827159605d3a31450>
2. Please set your APPEUI, DEVEUI and your APPKEY !
	1. … by creating an app and device at TTN: <https://console.thethingsnetwork.org/>
3. Upload it to your MKR 1010 and it should run.